Figure 46: St. Kilda Brighton Tramway Map from: The Brighton Electric Line
http://www.vicsig.net/index.php?page=trams&section=vr
3.5.2 Sandringham to Black Rock and Beaumaris

As with the push to extend the St Kilda railway line, the completion of the railway to Sandringham in 1887 spurred local agitation for further extension, partly with the promise of attracting further land boom property speculation. While there were a number of tramway leagues formed around Cheltenham and Beaumaris, it was Moorabbin Shire Council, which ultimately constructed a horse tramway in 1888 to service the areas south of the station to Cheltenham and Mordialloc. However, the onset of the Depression in 1891, saw the tram falter, eventually closing in 1914. ¹²⁹

New schemes for rail and tramway construction were also put forward at this time, and the Railway Department acceded in November 1914 to build an electric tramway from Sandringham.

to Black Rock using an inland route. Unlike the Brighton Tramway, this line was to be at the standard gauge, possibly in recognition of the efficiencies from use of existing rolling stock from the Municipal trams, and possible future integration, in contrast to the isolated broad gauge Brighton tram. Difficulties in obtaining rails and electrical equipment meant the line was not ready for opening until 10 March 1919. The depot was built in Sandringham railway station yard off Bay Street, and a spur track ran to a terminus in Station St. allowing for direct interconnecting with the trains.

Further lobbying from Beaumaris residents saw the Parliamentary Standing Committee consider an extension in 1916 and again in 1919, but not completing it until September 1926 in part thanks to a subsidy from Sandringham council. This area, at the extreme edge of Melbourne, did not see the development hoped for, and the extension operated for several years with very low patronage and heavy losses, to become known as the ‘Bush Tramway’) closing in August 1931 in another Depression.\footnote{Arthur Stone ‘The Sandringham Tramway’ – Running Journal, Volume 6, Number 2, Oct-Nov 1969}

Single man operation in modified tramcars and the increase in patronage during World War II as a result of petrol rationing, saw the Sandringham-Black Rock tramway operate profitably for a time. However, in June 1945 the Railways Department announced the closure of the line and replacement with an omnibus service. The ensuing public campaign to keep the line open dragged on, but ultimately was lost and on 5 November 1956 the tramway was replaced with railway operated buses.

The former car barn at the Sandringham railway station was converted to a bus depot and maintenance workshop with a row of shops built across the former entrance. A substation may also survive from the tramway. Tramway Parade, Beaumaris recalls the former horse tramway.\(^\text{131}\)

### 3.6 Tramway Board

Because of the expiry of the original 25 year lease to the MT&OC, operational authority for the cable tram and the Royal Park horse tramway reverted to the Tramway Trust on 30 June 1916. The Tramway Board, a State government agency, was formed to take over. Under the provisions of the Tramway Board Act 1915, the employees of the MT&OC and the Trust were transferred to the Tramway Board together with all property.

At the time of the Tramway Board takeover there were eleven brick power houses equipped with mostly locally-made steam engines and boilers, 18 car sheds (all but two of timber and iron construction) repair shops on Nicholson Street, and head office in Bourke Street. Rolling stock comprised 490 dummies, 472 standard trailers, 56 bogie trailers and small numbers of other cars of different varieties.\(^\text{132}\)

As an interim measure, the Tramway Board still undertook some significant works, including commissioning the construction of new cable tram sets to alleviate congestion, upgrading some engine houses, and erecting other facilities, such as the shelter in McArthur St. and the depot office at Clifton hill, both of which feature the otherwise rare TB monogram.

![Figure 50: Melbourne Tramway Board monogram on Clifton Hill Depot](image)

### 3.7 Melbourne & Metropolitan Tramways Board (MMTB)

The Melbourne & Metropolitan Tramways Board (MMTB) was appointed (following legislation in 1918), as an independent statutory body which reported to the Minister of Public Works,\(^\text{133}\) responsible for all tramways within a ten mile (16km) radius of the Melbourne GPO, with the exception of the Victorian Railways ‘Street Railway’ lines.\(^\text{134}\) It took over the cable tram

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\(^\text{132}\) Tramways Board, Report and Statement of Accounts for the period 28/1/1916-31/6/1917. Appendix 2  
\(^\text{133}\) Melbourne and Metropolitan Tramways Act 1918 (No.2995)  
\(^\text{134}\) Public Record Office Victoria Agency VA 2694- Melbourne and Metropolitan Tramways Board
network and Royal Park Horse tramway, and the Municipal tramway trusts within 12 months, but delays were experienced because the MMTB was not empowered to construct electricity generators, so there was a wait for the SEC to be formed while negotiations over the purchase of the Essendon Lines in which Cr Showers represented the Essendon City Council resulted in the NMETL tramways becoming part of the MMTB System on 1 August 1922. A seven member Board, Chairman and Deputy Chairman were appointed. The MMTB inherited 216 electric trams of twenty-one different types from its predecessors, which it reclassified under classes A-H or J-V.

The majority of the suburban electric tramway trusts were transferred to the Board on 2 February 1920:

- Prahran and Malvern Tramways Trust
- Hawthorn Tramways Trust
- Melbourne, Brunswick and Coburg Tramways Trust
- Fitzroy, Northcote and Preston Tramways Trust
- Footscray Tramway Trust
- Northcote Municipality Cable Tramways

The North Melbourne Electric Tramway and Lighting Company system was not included until 21 December 1922, due to the need for the State Government to make separate arrangements for absorbing the Company's electric lighting supply infrastructure.

The composition of the Board was initially based on transferring expertise from the various Trusts. Alex Cameron was appointed the Melbourne & Metropolitan Tramways Board (resigning his role with the Prahran & Malvern Tramways Trust on 31 October 1919) and several other P&MTT officers also took up senior positions with the MMTB, which led to many of its engineering and management practices being continued in the larger organisation.

### 3.7.1 Rationalisation and the General Scheme

With such a diversity of rolling stock, different traction systems and unco-ordinated system of depots, maintenance facilities, offices and other infrastructure, the Melbourne Tramways clearly required rationalisation once they had come under a single administration. To this end, the MMTB undertook studies of the existing tramways and Melbourne’s transport needs and prepared a “General Scheme for the future Development of Tramways” in the metropolitan area. This was specifically required in an amendment to the Tramways Act to provide a plan or framework upon which a systematic extension could be carried out, and to provide a basis for the future development of the tramways of the Metropolis. The proposal envisaged a vast expansion of the tramway system with several new lines. The main issue was what to do about the aging cable system, and the inability to increase its capacity. For example the cables and engines had a limit to how many or how heavy the trams on the line could be.

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136 Russell Jones
137 MMTB, Some facts concerning the Melbourne Tramways, Sands & McDougall 1924.
138 No. 3074. In Act to amend the *Melbourne and Metropolitan Tramways Act* 1918. [28th September, 1920.]
139 Some facts connected with Melbourne Tramways October 1924, Sands & McDougall, (copy provided by Robert Green)
The report considered options for various forms of public transport including total or section replacement of the cable system with trolley, conduit or surface contact electric tramways, battery, petrol or petrol electric trams and motor busses of (trolley) trams.140

There was some opposition to the modernisation of transport in Melbourne. Councillor and a member of one of the earlier trusts, David Hennesey had concern for "City Disfigurement" caused by the proposed overhead wires for the trams. He was interested in the conduit system of current collection in operation in London and Paris. The Melbourne City Council also initially opposed to the trolley wires and the noise of electric trams in comparison with the cable cars. The efficiency, cost and safety of the overhead system won the day, in large part to the defence by Board Chairman Alex Cameron. 141

The board undertook various studies of the existing tramways and Melbourne’s future transport needs in order to prepare a plan of development this resulted in the “General Scheme”, which was something of a wish list, indicating future tram lines forming a web across the city and suburbs.142 The intention was to develop new routes as potential traffic and revenue warranted, with a combination of serving existing needs and facilitating future suburban development. Indeed it was a stated aim of the general scheme that it “…precede the population, rather than follow the population [so that] …the city, under such a principle of transit development, is enabled to grow and expand in an orderly predetermined manner.”143 In this sense the tramways General Scheme pre-empted the role of the Metropolitan Town Planning Commission, and their report of 1929.144

By 1929, the MMTB was able to point to its successes in constructing 55 miles of new double electric track, converting 15 miles of cable track and carrying over 2 billion passenger trips. 145 The role of the tramways in promoting further suburban development can be seen in the dramatic increases in patronage. Between 1918, when electrification began, and 1924, the number of passengers on the metropolitan rail system grew from 97 million to 159 million.146

The Scheme proposed new lines along major connecting roads, linking the isolated Footscray lines via Ascot Vale and Maribyrnong, new lines in Williamstown, Ivanhoe, Brighton, and extensions to nearly all the existing lines. A couple of sections of track such as Rathdowne Street cable tram, and Victoria St Ascot Vale.147

141 D. Menzies “The 1922 Plan - Running Journal Volume 10, Number 1 February 1973
142 Some facts connected with Melbourne Tramways October 1924, Sands & McDougall, (copy provided by Robert Green)
143 MMTB, Melbourne Tramways, The Development of a Great System MMTB c 1927. (copy provided by Robert Green)
145 Melbourne and Metropolitan Tramways Board, Melbourne and Metropolitan Tramways Board Its Progress and Development 1919-1929, MMTB, 1929.
146 Encyclopaedia of Melbourne, Suburbs and Suburbanisation http://www.emelbourne.net.au/biogs/EM01440b.htm
147 “MMBT Plan for General Scheme” (in Running Journal Volume 10, Number 1 February 1973)
Figure 51: General Scheme for Tramways MMTB 1922. (Running Journal Volume 10, Number 1 February 1973)
Figure 52: Melbourne’s Tramways c1938 showing conversions of cable trams to electric.
The tram network was gradually rationalised, route numbering introduced, and various services extended. The cable trams were progressively converted to electric traction, commencing with the St. Kilda line in 1925 and finally the conversion of the Northcote line in 1940 initially to bus operation, but then electric tram in the 1950s.
3.7.2 New Tramcar designs

Part of the MMTB plans included developing a new tramcar design to cope with much higher passenger loads, enable faster ingress and egress, and overall running efficiency.

However, the first new trams to be built by the Board were additional cable trams to meet the immediate demand for increasing capacity on these lines. A group of 24 single truck cars were built to an existing design, pending finalisation of the design of a large bogie car. The Prahran and Malvern Trust had recently ordered several trams of the Q, R and S type, with a saloon at either end and a semi open compartment between on a dropped frame.

Figure 55 P&MTT No 44 showing drop-centre three entrance configuration which influenced the original W Class.

Figure 56 “L” class tram 101, (in later MMTB livery) one of six built for the P&MTT and the predecessor to the W. W1 and W2 http://www.myweb.net.au/mottram/trams/nonstd/NONSTD.HTM

This was the progenitor of the large bogie tram to be called the W class tram. It was designed and manufactured in the MMTB Holden Street Workshops in North Fitzroy from 1923 and
continued to be the mainstay of the Melbourne Tramways for the next 50 years or more with twelve different major variations and over 750 examples.

The first W class were highly successful on the suburban routes, but the narrow entrances and aisles slowed loading when they ran in Swanston Street after the cable conversion. The problem was overcome by altering the design of the drop centres to make an open section with two longitudinal seats near the edges of the car. A complex series of changes ensued with various seat layouts from W to W1 and then to W2 type.\textsuperscript{148}

Subsequent versions of the W saw the open sides or three entrances replaced with two larger openings. The W5 and W6 variants (which included many earlier trams converted to this configuration) featured smoother suspension. These became the backbone of the Melbourne tram fleet for 30 years until the introduction of the z class. The SW5 introduced automatic sliding doors and padded seats, making travel in the centre section more comfortable.\textsuperscript{149}

\begin{figure}
\centering
\includegraphics[width=\textwidth]{figure57.png}
\caption{W1 No 4231, with open sides in original brown and cream MMTB colours. (http://www.myweb.net.au/mottram/trams/moomba2000/moomba2000.htm).}
\end{figure}

Originally painted in the former P&MTT’s chocolate and cream paint-scheme, the green and cream colours which came to typify W-class trams were introduced in 1925 to complement Melbourne’s tree-lined boulevards and remained standard until after the formation of the Metropolitan Transit Authority (the MET) in 1983. The colour scheme was first used on buses in 1924, (having been chosen ahead of an alternative of black with red wheels),\textsuperscript{150} and one man trams. It was introduced in 1927 on bogie trams initially as an experiment with “one of the large bogie electric trams running on the Toorak route…painted green instead of the usual brown colour.” While the view that the colour was chose because it complemented or blended with the deciduous trees along Melbourne’s Boulevards, one other reason cited was that the use of green

\textsuperscript{148} This is best shown in seating diagrams in Norman Cross, Dale Budd (ed), Randall Wilson (ed) 2001 \textit{Destination City - Melbourne’s Electric Trams}
\textsuperscript{149} K.S. Kings, “50 years of the MMTB”, \textit{Running Journal} Vol 6. No 3 Dec 1969, pp.7-8
\textsuperscript{150} MMTB letter book no 3 29/8/1924 (Memos signed by the secretary - (probably forwarded to the engineer), transcribed copy provided by Robert Green.
instead of brown as a colour for trams will make possibly a slight saving in the cost of painting” presumably due to the lesser price and quantity of pigment used.\textsuperscript{151}

Advertising on tramcars also came in during this period initially with an “experiment with a small and neat form of advertising board placed on the outside of tramcars, just under the cornice of the roof, directing attention to some form of event of the day, such as a sale, carnival, sports meeting, or other public attraction.” The advertising was seen as a means to increase revenue, both directly from the advertisers, but also by increased patronage of the tramways.\textsuperscript{152} This can be seen as the forerunners of the more substantial advertising from the discrete panels on the ends and sides, to all-over, plastic wrap-arounds, covering windows and doors with perforated layers.

![Figure 58W 2s and 5s in 1970s showing advertising panels](http://www.stampboards.com/viewtopic.php?f=10&t=10448)

One of the early decisions of the MMTB was to undertake its own manufacture of rolling stock, rather than tender for small numbers of different vehicle types according to need and demand. To do this it established new workshops on vacant land opposite the Preston Depot on the corner of St George’s Road and Miller Street.

The Preston Tramway Workshops were constructed to integrate and centralise tram manufacture and maintenance, into the Tramways Board’s operations.

\textsuperscript{151} “New Colour for Trams. Green instead of Brown” The Argus, Friday June 3 1927 p.16.
\textsuperscript{152} The Argus 18 October 1929. p.8
The Melbourne tramways moved into a "golden era" in the 1920s and 1930s, when patronage was consistently high and the Board was provided with the resources necessary to convert the cable tram system and maintain and expand the electric system to meet growing demand and suburban expansion. Construction of connecting tramways such as Brighton Road between Chapel Street and Elsternwick East was given priority.

In 1925 a new tramway from the city, through Royal Park to West Coburg was opened. The city terminus in William Street was designed to avoid the cable tram routes the Essendon Lines were extended south along Flemington Road to join the new electric tram route at Abbotsford Street, with the cable being cut back to that point. Maribyrnong River trams used a new line along Racecourse road direct to Flemington road, so that after nearly 20 years trams were able to run directly from Essendon to the city. The original Essendon Tramways cars were dispersed to less heavily trafficked routes and 33 W class trams were stationed at the Essendon Depot. This was happening when the many other cities were actually closing their tramways or starting to run them down.

Several new depots were constructed, including that on Sydney Road Brunswick, South Melbourne, Glenhuntly and Preston. A number of electricity substations were built to systematise the distribution of power from the SEC Latrobe Valley generation and both extensions to the existing lines, and entirely new routes were constructed. Central control of the substations was also implemented, operated from the central control room in Faraday Street Carlton, and a secondary control room established for use in the event of damage from enemy air attack during World War 2 between Queensbury and Bourverie Sts. In order to reduce supervisory manpower requirements, the MMTB constructed remote control gear of its own design for its electrical substations, and achieved a capability such that almost 100% of substation components could be built in-house.

After the Essendon tramway was taken over by the Melbourne & Metropolitan Tramways Board a saw tooth roof extension to the original car shed, constructed by Thompson & Chalmers Pty Ltd, was made in 1924, and an overhead tower wagon shed was erected by Massey & Sons. A further
extension to the car shed was built by McDougall & Ireland in 1941-42, and the two storey brick office building, erected by EA Watts, was added in 1944.153

In 1937, a new headquarters building was erected in Little Collins Street to house the MMBT centralising management, administrative and design functions.

### 3.7.3 Wartime and Post War survival

During World War II patronage of the tram system was greatly increased, and new line extensions constructed to serve the munitions factories in Footscray and Maribyrnong.

Various attempts were made to reduce costs or expand services including trials of one-man operation and all night operations. Twenty-four single truck Q and R class trams were modified for one-man operation on selected routes where light loadings made them viable, such as some all-night services and daytime routes with small passenger loadings, such as the Point Ormond and Holden Street shuttle services.154

After World War II other Australian cities began to replace their trams with buses. Melbourne however resisted, much of the credit going to the then Chairman of the MMTB Robert Risson who was able to argue in economic terms for the retention of tramways, both because of their efficiency in moving large numbers of commuters in contrast to private cars and buses, and the prohibitive cost of ripping up the concrete-embedded tram tracks.

The Melbourne Metropolitan tramway system had a peak in usage in 1949 when there were 260 million trips, but with the increase in incomes in the post war boom, and consequent increase in private motor car ownership, patronage dropped for most of the second half of the century.

Some tramlines were closed, notably the Footscray Branches (and the VR Brighton and Sandringham lines) but some new lines were opened in the 1950s, such as the West Brunswick and Essendon Aerodrome lines. The Point Ormond also closed, while connection of the Footscray system to the main system finally occurred in 1954.

One of the major post war developments, was the construction of new depots at East Preston and Nicholson Street, North Fitzroy in 1955 following the re-introduction of trams in Bourke St after conversion of these routes from cable. The East Preston depot was opened by the minister for Transport A. G. Marner on 24 June 1955,155 and it initially serviced route 96, and later became an adjunct to the St Kilda and Port Melbourne light rail routes. The depot jointly operated these routes with South Melbourne. On December 19th, It ceased operating as a tram depot in 1993 but houses City Circle W-Class fleet, and some other trams.156 North Fitzroy re-opened as a "running depot" 2009 or 2010. It was still connected to the system, but not used, other than for the storage of privately owned trams.

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153 Victorian Heritage Register, Essendon Tram Depot.
154 All night long: Melbourne’s recycled one-man cars
155 Plaque on front of building.
An example of the arguments occurring in transport planning is illustrated by the initial plans for the St Kilda Junction Project and associated road improvements, which included the retention of the East Brighton and Malvern Burke Rd trams in narrow Wellington Street. The MMTB sought successfully for trams to utilise the centre median strip in the divided roadway and so when opened in late 1968 it proved to be more than a symbolic relocation. The development was similar to what was by then common practice in Europe. In an unusual form of planning, underground of Swanston St and other CBD lines was briefly considered in 1962.
Figure 62: Model for proposed underground tram route beneath Swanston and Bourke Streets (Destination City 4th ed.)

Figure 63: St Kilda Junction, 30 August 1969. Photograph courtesy Mal Rowe.
In 1969 the Metropolitan Transport Committee released the 1985 Transport Plan for Melbourne. The report recommended the continued operation of trams and that further studies be undertaken into proposed tram or bus extensions.\textsuperscript{157}

By the 1970s Melbourne had the only major tram network in Australia, with only single or tourist lines operating elsewhere such as Adelaide’s Glenelg Tram and the Bendigo and Ballarat historic tourist trams.

Various reasons have been put forward for the resistance to closure in Melbourne including the wide streets and geometric street pattern making trams more practicable than in many other cities, the power of the unions in protecting their jobs and public amenity, the important role of partly MMTB, Chairman Sir Robert Risson, and the relative modernity of the rolling stock, since with the W class, and replacement of cable trams, much of it had been renewed from the 1940s. The relative modernity of the infrastructure also assisted this, as the conversion of the cable trams meant that much of the system was much newer than Sydney, Brisbane and Adelaide.

The system may have stagnated in the later twentieth century, but revitalising commenced in the 1970s with the first completely new trams, the z-class being designed and developed at Preston Workshops. This new, modern style of tram was modern in many senses and although now not as emotionally appreciated as the traditional W class, it set the scene for a new approach to tram design and operation. The main functional changes were in the pay as you enter facilities, with seated conductor, which might be seen as a compromise to one man operation.

An important project was the development of a new prototype tram, 1041 at the Preston Workshops, which although taking a long time to get it built and running, eventually convinced Government that modernisation of the rolling stock should happen. The tram in its unusual colour scheme, itself representing a break with the past, was known as the “Clockwork Orange” tram by many and was followed by the new Z’s also in orange.

In the 1980s government policies shifted towards increased privatisation and reduction in public spending on tramways, with the major battle over single operator trams and the removal of tram conductors. This was seen not only as an industrial relations or public amenity issue, but also a cultural one, as conductors were considered “custodians of Melbourne’s soul” as one contemporary website puts it.\textsuperscript{158}

The conductors strike saw 250 trams were parked and abandoned by their drivers and conductors in Melbourne’s CBD streets for 33 days commencing 1 January 1990. The trams did not move because the government shut down the power grid. This event is still commemorated by past conductors and former and current tram workers.\textsuperscript{159} However, one man tram operation finally eventuated as part of the settlement process.

The last decade has seen a revitalisation of the system, with new routes, rolling stock, greater priority given to trams in sharing the roads and upgraded passenger facilities.

\textbf{3.7.4 Omnibuses}

\textsuperscript{159} The Age, January 16, 2010
Horse Drawn busses (along with hansom cabs) provided the mainstay of public transport in Melbourne before the introduction of the Cable Trams. Under the MT&OC, omnibuses continued to provide an extensive service, but generally were routed to extend the cable lines into surrounding suburbs. This process continued with the development of electric trams, as bus services were progressively relocated to the outer areas.

In January 1925 the MMTB became a motor bus operator, and it has operated these vehicles continuously since then. The Board’s early powers were limited by its Act of Parliament which permitted buses to be run for “stimulating of developing the traffic of any tramways”. The Board’s Chairman, Alex Cameron returned from an overseas study tour early in February, with a new enthusiasm for busses. With the upsurge in unrestricted running of privately owned motor buses along tram routes during 1927-24, and the pending cable tramway conversions, the Board ordered 45 motor bus chassis and bodies. The first service commenced from the City, at Latrobe Street, via St. Kilda Road, to Elsternwick station.160

The Board also applied to operate buses on three other routes: Camberwell Junction to Hawthorn Bridge, Burke Road and Barkers Road to Victoria Bridge and (3) Essendon to Heidelberg, but the Minister felt that these routes should be operated by private buses and did not grant then to the Board. By the middle of 1926, there were 55 busses in the Board’s fleet engaged on the Elsternwick route and on cable tramway conversions.161

The former Nicholson Street cable tram sheds and workshops were used converted to a central bus depot and workshop in 1929, and from 1935, this site became the MMTB’s main bus depot and maintenance workshop. Facilities were included for servicing, refuelling (with 6 large above-ground diesel tanks which are still in place) and large traffic offices and amenities building in a modernist style.162

Two new bus garages were constructed by the MMTB in Port Melbourne and Footscray in 1937 to house a growing fleet, the latter as an extension of the tram depot.163 Port Melbourne depot was closed in 1966 and the Footscray bus fleet was transferred to the tram depot when that closed in 1962. there was considerable industrial action over the closure of the Footscray trams and their replacement of one man operation busses, which resulted in loss of conductors’ positions.164

163 MMTB Annual Report 1937.
Conflict with road traffic has been regularly raised as an issue for Melbourne’s tramways. The original complaint came from operators of other hire vehicles as the tramways almost immediately made other public transport redundant when a new route opened. However, from the late 1920s, the growing amount of motor cars and trucks led to congestion on a number of

roads, and in particular the main entrances to the city. The tramways officials defended their role in this situation by arguing that trams moved people far more efficiently than omnibuses or private vehicles and pointed to the small increase in the number of the Board’s vehicles over the period that congestion became a public concern (i.e. 805 trams in 1923 and 925 in 1929). The board also argued that the conversion of the cable system to electric traction proved to reduce congestion and accidents.166

In some cases the replacement of trams with buses was considered as a means of alleviating congestion and conflict with cars. Board Chairman Hector Bell, was finding all over the world, that diesel buses were replacing trams and came to the conclusion that this was the way to go. However, he recommended in his report of 1939 that the Bourke Street tram should not be closed when it came up to converting the cable line the MMTB reserved the right to convert to electric, and so trams survived on this route.167 The decision to put trams back on Bourke St was made in 1943, but took a long time to implement.168

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167 Russell Jones. ‘Hector Hercules Bell – ringing in the new’ 2008